



50B5

# BEAM POWER AMPLIFIER

MINIATURE TYPE

50B5

## GENERAL DATA

### Electrical:

#### Heater, for Unipotential Cathode:

Voltage. . . . . 50 . . . . . ac or dc volts  
Current. . . . . 0.15 . . . . . amp.

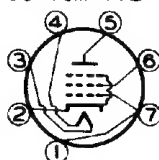
#### Direct Interelectrode Capacitances (Approx.):<sup>o</sup>

Grid-No.1 to Plate . . . . . 0.5 . . . . .  $\mu\text{f}$   
Input. . . . . 13 . . . . .  $\mu\text{f}$   
Output . . . . . 6.5 . . . . .  $\mu\text{f}$

### Mechanical:

Mounting Position. . . . . Any  
Maximum Overall Length . . . . . 2-5/8"  
Maximum Seated Length. . . . . 2-3/8"  
Length from Base Seat  
to Bulb Top (excluding tip). . . . . 2"  $\pm$  3/32"  
Maximum Diameter . . . . . 3/4"  
Bulb . . . . . T-5-1/2  
Base . . . . . Miniature Button 7-Pin  
Basing Designation for BOTTOM VIEW . . . . . 7BZ

Pin 1-Grid No.1  
Pin 2-Cathode,  
Grid No.3  
Pin 3-Heater



Pin 4-Heater  
Pin 5-Plate  
Pin 6-Grid No.2  
Pin 7-Grid No.1

## CLASS A<sub>1</sub> AMPLIFIER

### Maximum Ratings, Design-Center Values:

PLATE VOLTAGE. . . . . 117 max. volts  
GRID-No.2 (SCREEN) VOLTAGE . . . . . 117 max. volts  
PLATE DISSIPATION. . . . . 5.5 max. watts  
GRID-No.2 DISSIPATION. . . . . 1.25 max. watts  
PEAK HEATER-CATHODE VOLTAGE:  
Heater negative with respect to cathode. . . . . 90 max. volts  
Heater positive with respect to cathode. . . . . 90 max. volts

### Typical Operation and Characteristics:

Plate Voltage. . . . . 110 . . . volts  
Grid-No.2 Voltage. . . . . 110 . . . volts  
Grid-No.1 Voltage. . . . . -7.5 . . . volts  
Peak A-F Grid-No.1 Voltage . . . . . 7.5 . . . volts  
Zero-Signal Plate Current. . . . . 49 . . . ma.  
Max.-Signal Plate Current. . . . . 50 . . . ma.

<sup>o</sup>With no external shield.

JAN. 2, 1946

RCA VICTOR DIVISION  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA

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**BEAM POWER AMPLIFIER**

Zero-Signal Grid-No.2 Current (Approx.)	4	ma.
Max.-Signal Grid-No.2 Current (Approx.)	8.5	ma.
Plate Resistance (Approx.)	14000	ohms
Transconductance	7500	$\mu$ mhos
Load Resistance	2500	ohms
Total Harmonic Distortion	9	%
Max.-Sig. Power Output	1.9	watts

**Maximum Circuit Values (for maximum rated conditions):**

Grid-No.1-Circuit Res.	{ fixed bias	0.1	megohm
	{ cathode bias	0.5	megohm

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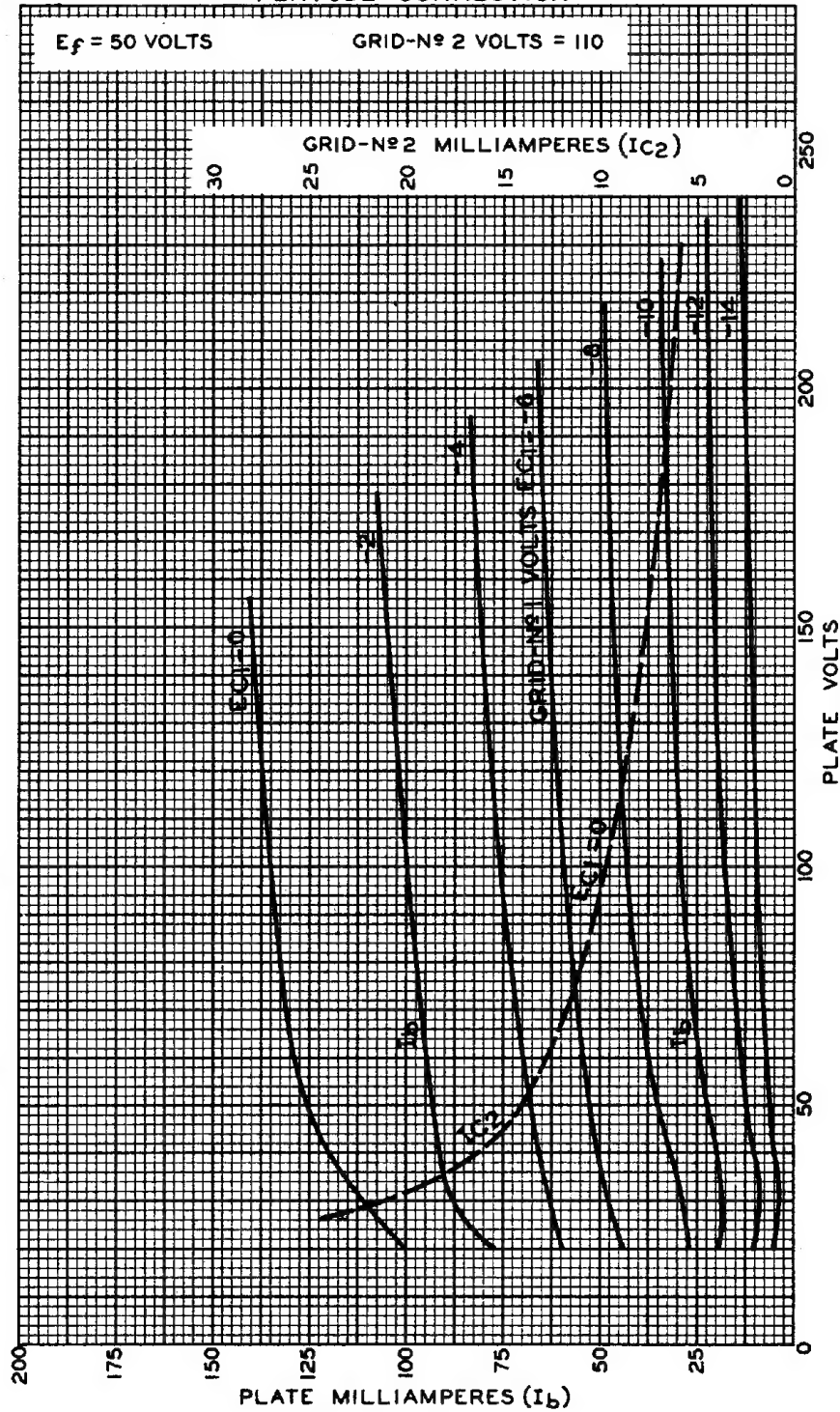
TENTATIVE DATA



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# AVERAGE PLATE CHARACTERISTICS PENTODE CONNECTION

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OCT. 8, 1945

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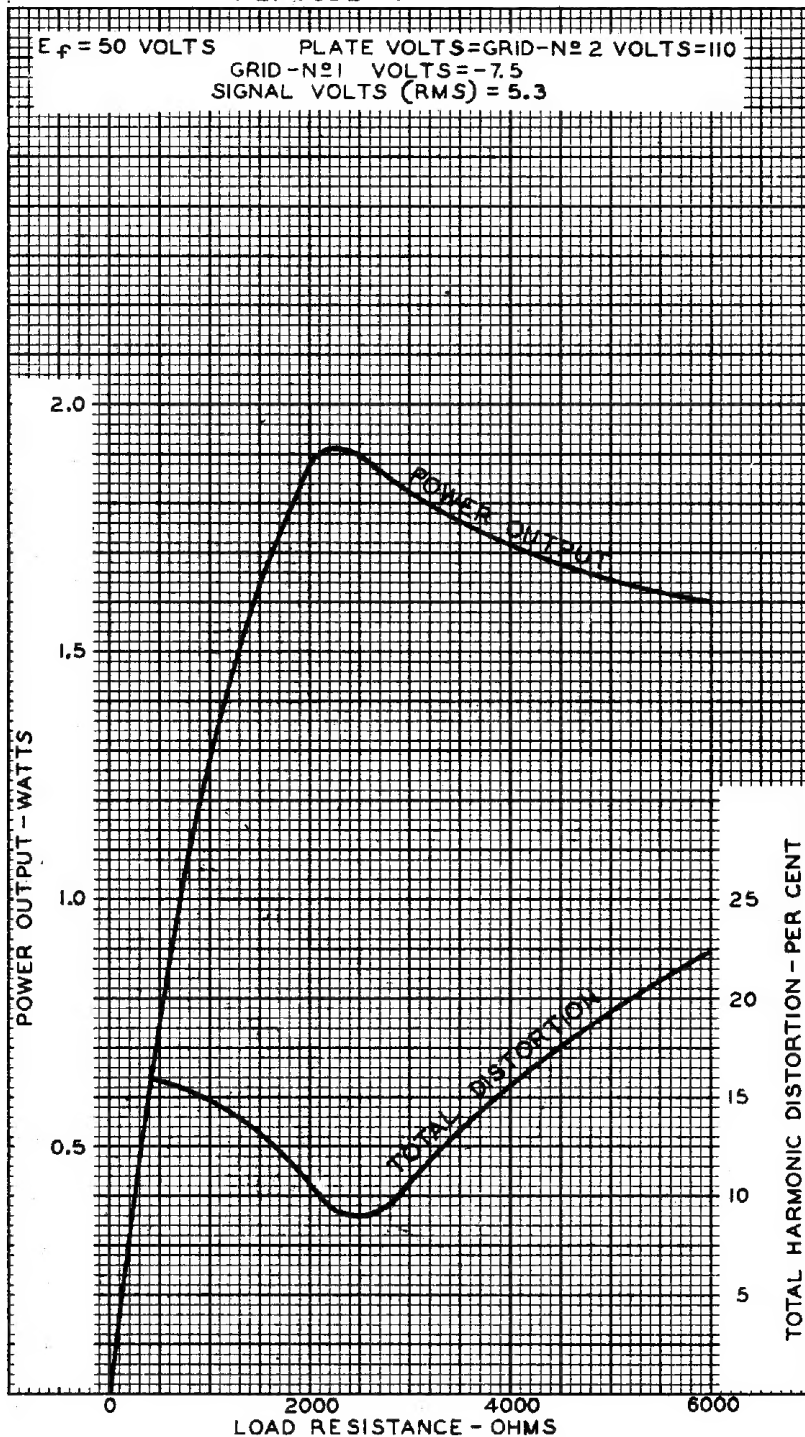
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# OPERATION CHARACTERISTICS PENTODE CONNECTION



OCT. 24, 1945

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92CM-6612